Index of Subjects

aggregate
  marine 120
  impact value 187, 188
  ten per cent fines value 187, 188
  tropical residual soils 85
air photo interpretation 209

boreholes 217, 229

Channel Tunnel 279-282
clays 103-108, 307-323
coastal management 283
cohesion 103, 104
cylinder dispersion test 105-107
  results 106, 107

dispersion 103
drilling fluids 161-168
  bentonites 162, 165, 166
  dirty water 162, 166
  micro-model tests 166, 167
  permeability impairment tests 162-166
  polymers 162, 166
  viscosity 162, 163

ejector well dewatering 169-185
  consolidation analysis 183-185
  drawdown rates 176-180
  flowrates 174-176
embankment dams 103-108, 365-380
erosion
  in embankment dams 103,104
erosion resistance tests
  crumb test 104
  cylinder dispersion test 105-107
  double hydrometer test 104
  pinhole test 104

field vane shear test 269
flood hazard evaluation 333-335

geothermal flux 387-390
groundwater 169-185, 357-364
  movement 239,240
  pollution studies 255-265

hydrogeomorphic mapping 333-335

Mackintosh probing 269
marine seismic surveying
  echo sounding 111,116,120
  navigation chains 111
  seismic reflection profiling 110, 116
  sidescan sonar 110, 116, 120
microgravity surveying 340-344
microtremors 193-208
  detection networks 193-208
    detection thresholds 198-200
    impact on hazard assessment 204-207
    objectives 193,194
    resolution 195, 196
    UK locations 194, 200, 201
  fault plane solutions 197
  focal depth 202, 203
  focal mechanism 203, 204
  hypocentre determination 196, 197, 201, 202
  magnitude determination 196
  source mechanics 197
  velocity structure models 195
mudstone rocks 147-160
  physical property tests 149-159
    comparison 153-156
    Duncan free swelling 151, 152, 153
    slake durability 150, 151
  sulphate increase in 383-385
  X-ray diffraction analysis 148,149,156,157

near-shore investigations 111-122

permafrost 387-390
piling 289-303
  pile foundations 294
pore water 103, 169, 181
pumping tests 267,268
  recovery data 267,268

resistivity surveying 229-241
  case histories 231-235
  downhole geophysical logging 235-239
  methods 231

sea-level rise 283

seismic surveying
crosshole seismic 217-228
crosshole reflection 225, 226
seam waves 218-220
seismic velocities 224
tomography 220-226
marine 111-120
shallow seismic 189
shales
arid climate 243-254
geotechnical properties 244, 246
occurrence 243, 244
swell characteristics 246-253
weathering 372-378
sinkholes 337-345
site evaluation 209-216
air photo interpretation 209
evaluation matrix 213
site ranking 213
terrain analysis 210-211
slope stability 325-330
soil fabric 125-146, 325-331
influence on large-scale strength 136-139
macrofabric features 132
macropore effects 325, 326
microfabric features 133
soil fabric tests
cone penetration 127, 129, 140, 141
consolidation tests 317, 318
oedometer testing 347-354
penetration resistance 361-363
simple shear 131, 142, 360, 361
strength index 129, 142, 143
triaxial 129, 141, 142
soil gas surveying 255-265
case study 260-263
of chlorinated solvents 255-257
method 258-260
softening in clays 307-323
origin of 320-323
sulphate 377, 383-385

tropical residual soils 1-102
classification 27-38
background 27
for engineering purposes 32-38
genetic classification 27-32
description and identification 39-52, 86-88
data collection 51, 52
general site characteristics 39-43
climate 41
geology 39
hydrology 43
landform 39
location 39
topography 43
vegetation 43
soil mass characteristics 49-51
behaviour 51
composition 49
nomenclature 51
structure 50
soil material characteristics 43-49
behaviour 48
bulk density 47
colour 44
fabric 44
mineralogy 49
moisture state 44
strength 44
texture 47
engineering properties and characteristics 73-85
hydraulic properties 79-81
mineralogy 73,74
partial saturation 81-83
structure 74-77
void ratio 77-79
origins and distribution 8-26
duricrusts 8, 9, 14
factors influencing depth 12-14
ferrallitic soils 11, 12, 21, 22
ferruginous soils 11, 12, 21, 22
fersiallitic soils 10, 11, 21, 22
lateral variability 18
pedogenic factors 9, 10
residual clay horizons 16
saprolites 16, 17
tropical weathering 8, 18, 19
transported soils
practical difficulties 84
testing and sampling 53-72
chemical tests 63, 64
classification tests 53-58
collapsing soils 62, 63
compaction related tests 59
dispersive soils 63
drilling and sampling 67-70
erodible soils 63

expansive clays 61, 62
in situ tests 70-72
mineralogy and microstructure 65-67
strength and sensitivity 59, 60
uses
aggregate 85
fills 83,84
road pavements 84, 85

Index of Localities

Australia
  New South Wales 23, 25
  Queensland 26

Canada
  British Columbia 210
  Saskatchewan 307-324

Dominica 44

Hong Kong 289-305

Kuwait
  Al-Dahr 337-345
  Kuwait City 358

Malaysia 24

New Zealand 326-330
Nigeria
  Kano 24
  southeastern 25
North Sea, Norwegian sector 125, 126

Saudi Arabia 243, 244, 269
Sierra Leone 26
Singapore 24
South Africa 26

UK
  Conwy, N Wales 169
  Derbyshire 365-378
  Don Valley 147,148
  Dungeness 195
  East Anglia 120-122
  Hinkley Point 194, 195
  Lyme Regis 115-120
  Port Solent, Portsmouth 191, 192
  Southern Britain 387-390
  Trawsfynydd, N Wales 194, 195
  Vale of York 229-231
  Wash, The 111-115
  Wylfa, N Wales 194, 195

USA
  central Arizona 333, 335

Zambia
  eastern 25

Index of Authors

Ali, K. M. 269
Al-Rifaiy, I. A. 337
Al-Sanad, H. A. 357
Aspinall, W. P. 191
Atkinson, J. H. 103, 347

Birch, G. P. 279
Bishop, P. K. 255
Broster, B. E. 209
Bruce, I. G. 209
Bullas, B. C. 187
Burston, M. W. 255

Chadha, D. S. 229
Charles, J. A. 103
Christiansen, E. A. 307
Clayton, K. M. 283

Davison, L. R. 347
Dhowian, A. 243
Dobinson, A. 109

Eastwood, P. R. 255

Findlay, M. J. 217

Gareau, L. F. 307

Hawkins, A. B. 383
Hawkins, T. R. W. 229
Hencher, S. R. 357
Herbert, R. 267
Hollamby, R. 161
Hossein, D. 269
Howsam, P. 161
Hutchinson, J. N. 387

Jackson, P. D. 217

Kenny, R. 333
Kragh, J. E. 217

Lerner, D. N. 255
Loken, T. 125
Love, M. 125
Lumsden, A. C. 357
Lunne, T. 125

McCann, D. M. 109
McDonnell, J. J. 325
Malone, A. W. 289
Marsland, A. 125
Mhach, H. K. 103
Miller, J. A. 365

Orhan Erol, A. 243

Pye, K. 365
Powrie, W. 169

Ritchie, M. E. A. 193
Roberts, T. O. L. 169

Sauer, E. Karl 307
Shaqour, F. M. 357
Skipp, B. O. 193

Thatcher, J. S. 217
Thomas-Betts, A. 387

Varley, P. M. 147

Wilson, S. L. S. 383